GLOSSARY

Annular Space: The space around the outside of the well pipe or casing between the native soil and the well pipe.

Aquifer: An underground body of water capable of producing fresh water at a sufficient rate to be considered a water source. While most aquifers are unconfined (on the sides), they have identifiable floors of impermeable material that define their thickness.

Attrition: Mechanical wear process in which particles rub and abrade against each other removing adhered surface contaminants and contaminated soils.

BTEX: Benzene, toluene, ethylbenzene and xylenes; a group of aromatic hydrocarbons that are present in gasoline and to a lesser extent in diesel fuel. They may also be used individually as solvents. Benzene is a known human carcinogen.

Control Point: The phase of the operation where worker exposure may occur.

DMSO: Dimethyl Sulfoxide; a clear, colorless, odorless liquid that is miscible in water and most organic solvents.

DNAPL: Dense Non-Aqueous Phase Liquids; organic and inorganic liquids denser than water and high enough in concentration to exceed their solubility in water, thus able to flow down the pores of the soil and sink through groundwater to form a discrete pool or phase beneath the surface of the groundwater.

Ex-Situ: "Out of Place"; remediation technologies that require excavation of solids or pumping of groundwater to effectively solve the contamination problem.

Flocculent: A chemical that can bind two or more molecules or complexes so as to form increasingly larger complexes of molecules until the complexes float or sink as large masses.

GCL: Geosynthetic Clay used as a bottom liner in landfills.

HDPE: High Density Polyethylene; an inexpensive, readily available plastic liner material for landfills and landfarms. The plastic has good mechanical strength and toughness but is subject to corrosive attack from some organic materials.

Hollow Stem Auger: A drilling method where a series of hollow shafts with a screw-type flight are assembled, typically in 5-foot-long sections, and turned in a borehole to drill by lifting soil up the flights. The hollow center may be used to drive sampling devices into the soil ahead of the auger to collect undisturbed environmental soil samples.

In-Situ: "In Place"; refers to remediation methods that do not require the soil or water to be brought to the surface and hence do not require excavation or pumping.

Leachate: Liquid material that drains from the bottom or sides of a landfill or other waste storage area.

LNAPL : Light Non-Aqueous Phase Liquids; organic and inorganic liquids less dense than water and high enough in concentration to exceed their solubility in water, thus able to sink through the open pores of the soil to the groundwater and to float on the groundwater to form a discrete pool or phase at the surface of the groundwater.

Mast: The elevated portion of a drill rig that shrouds and protects the drilling flights and drive mechanisms. On most drill rigs, the mast is kept in a horizontal (lowered) position during traveling and when not in use. It is raised into vertical position after the rig has been located at the appropriate drilling spot.

Mud (Drilling Mud): A slurry prepared from bentonite or other fine-grained solid material that may be used as a lubricant for the drilling bits used in borings or well installations or to seal the edges of the boring. Muds are most commonly used in petroleum or other deep drilling. When mud drilling is used in environmental well installations, the mud should be removed to the extent practical before sampling, or a biodegradable mud should be used to prevent the mud from sealing the borehole.

NAPL: Non-Aqueous Phase Liquid; any organic or inorganic liquid sufficiently high in concentration to exceed its solubility in water and thus exist in the environment as a discrete phase, usually beneath or on groundwater.

Neutron Density Gauge: A measurement device used to determine moisture content in clays and other soil materials. The device contains a radioactive source as part of the measurement mechanism.

NORM: Naturally Occurring Radioactive Materials.

Pathogen: A microorganism that is known to cause diseases in plants, animals, or humans.

POTW: Publicly Owned Treatment Works; a municipal or county water treatment works.

PPE: Personal Protection Equipment; the various pieces of clothing (steel-toed shoes, gloves, coveralls, etc.) and respirator equipment used by personnel for their personal protection from a variety of chemical, physical, radiological, and biological hazards.

Pug Mill: A type of mixing equipment that utilizes a rugged mixing blade configuration to mix high-solid slurries. It may be used to add solids to slurries as a means of thickening.

Pump-and-Treat: A treatment process whereby groundwater is extracted from a contaminated aquifer and treated by some appropriate technology on the surface before reinjection, infiltration, or discharge to a surface water.

PVC: Polyvinyl Chloride; an inexpensive, resilient plastic that has good resistance to many chemicals, frequently used in piping systems and sometimes used as a flexible liner for landfilling and landfarm applications.

RBC: Rotating Biological Contactor; a biological reactor consisting of a series of closely placed rotating disks with a very high total surface area capable of being colonized by a thin film of microbes. The rotating disks are half-immersed in the wastewater stream as it flows through the disks housing, allowing the fixed film microbes to be repeatedly soaked in the wastewater while emerging repeatedly into the air, thus allowing the microbes to aerobically degrade the contaminants in the wastewater.

Surfactants: "Surface Active Agents"; chemicals of a large range of types (ionic, non-ionic, zwitterionic) that contain both polar and non-polar molecule regions.

SVE: Soil Vapor Extraction; the process of removing volatile and some semivolatile contaminants by the combined effects of vacuum-increased volatility and vacuum-enhanced mass flow of air into, through, and out of a contaminated unsaturated subsurface zone, thus removing an increased mass of the volatilized contaminants.

SVOC: Semivolatile Organic Compounds; any of a large group of compounds including the polynuclear aromatic compounds (PNAs) and the polyaromatic hydrocarbons (PAHs) that are low in volatility under normal atmospheric conditions.

TCLP: Toxicity Characteristic Leaching Procedure; an EPA-defined analytical procedure used to classify waste for disposal purposes.

Vadose Zone: The region in the subsurface between the ground surface and the top of the capillary fringe above the water table. This region is characterized by the presence of some liquid water but also some open (vapor-filled) pore spaces.

VOC: Volatile Organic Compounds; any of a large group of compounds including the monoaromatic (BTEX) and ketones (MEK, acetone, MIBK) that are readily volatile under normal atmospheric conditions.